ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Life Technologies™ Your Molecular & Cell Technology Partner

Melanin-Concentrating Hormone Receptor 1 (MCHR1) Antibodies

Cat. # MCHR11-S	Rabbit Anti-Human MCHR1 Antiserum	**SIZE:** 100 ul
Cat. # MCHR11-A	Rabbit Anti Human MCHR1 IgG (aff pure)	**SIZE:** 100 ug
Cat. # MCHR11-P	Human MCHR1 control/blocking peptide	**SIZE**: 100 ug

The cyclic neuropeptide, Melanin-Concentrating Hormone (MCH), plays an important role in food intake and energy balance. MCH stimulates feeding, it is up regulated in obese mice and in fasting. Animals lacking MCH eat less and are lean. Most recently, a receptor for MCH (**MCHR**) has been cloned and characterized. Human MCH receptor is 402-aa membrane protein. It is also described as an orphan G-protein coupled receptor **SLC-1 or GPR24**, somatostatin receptor-like protein. It has 7 transmembrane domains, a Dry motif at the boundary of TM3 and the 2nd intracellular loop, a consensus site for N-linked glycosylation at the N-terminus. MCHR is expressed in ventromedial and dorsomedial nuclei of the hypothalamus.

Recently, an orphan G-protein coupled receptor (**SLC-1, GPR24**) has been identified as the receptor of MCH. MCH receptor (**MCH1R**; human 402 aa, rat 353 aa) is predicted to contain 7 transmembrane domains, a feature typical of G-protein coupled receptors. It is primarily expressed in the ventromedial and dorsomedial nuclei of the hypothalamus. Moderate levels of MCHR are also found in the eye and skeletal muscle, tongue, and pituitary. MCHR binds MCH with sub-nanomolar affinity, and is stimulated by MCH to mobilize intracellular Ca and reduce forskolin-elevated cAMP levels. Recently, a novel second human MCH receptor (**MCH2R**) has been cloned and characterized. MCH2R is mainly expressed in the brain.

Source of Antigen and Antibodies

Antigen	16-aa peptide of human **MCHR/GPR24/SLC-1** (gene accession # Q99705, refs 1) ; **Designated (MCHR11-P-P or control peptide)** conjugated to KLH; epitope location ~ C-terminus Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal antiserum # **MCHR11**-S and IgG, purified over antigen-agarose (Cat # **MCHR11**-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage
Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..
Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique). (refs 2).
IP: (see refs 2).

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence: Not tested.

Specificity & Cross-reactivity

The human MCHR11-P peptide sequence is 100% conserved in rat, mouse and monkey MCHR1. No significant sequence homology of MCHR11-P is seen with other MCHR2 or other GPCR. Antibody crossreactivity in various species is not established. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol see detailed protocol at the web site).

General References: 1. Chambers J et al (1999) nature 400, 261-265; Saito Y et al (1999) Nature 400, 265-269; Kolakowski LF et al (1996) FEBS Lett. 398, 253-259; Lakaye B et al (1998) BBA 1401, 216-220; Hills J et al (2001) JBC 276, 20125-20129

Citation of ADI antibodies:

Murdoch H WB,	2005	J. Biol. Chem. 280, 8208-8220 chicken MCHR
Kemp EH WB,	2002	J Clin Investi. 109-, 923-930 human samples

*This product is for *in vitro* research use only.

MCHR11-S-A-P 71214A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com